



Vaporless Manufacturing, Inc.
Quality Petroleum Equipment
Solutions for Over 20 Years

April 3, 2000

To Whom It May Concern:

Subject: California Ethanol Advisory; March 2000

The California State Water Resources Control Board has addressed possible piping system component problems when they are converted to ethanol blended fuel systems.

It is stated on VMI brochures that our leak detectors and overfill protection valves are compatible with:

Gasoline, 100% methanol, 100% ethanol, up to 15% MTBE

Any combination of the above

#1 or #2 diesel, kerosene, Jet A or JP 4

The Vaporless Manufacturing, Inc. warranty covers these fuels.

It should be noted that, although the component materials used in VMI products are compatible with ethanol, the introduction of ethanol into storage tanks will result in particles, contaminants, and debris being pumped throughout the piping and dispensing system.

As taken from Storage Procedures for ADM Ethanol "ethanol will loosen rust, varnish and gums from previously used tanks, it is important to clean all loose material from the tank before filling" and "it is important that the tank be **clean** and **dry**." and "Install an 40 to 80 mesh screen filter in the transfer line from the tank."

From Other Advance Preparations "Because ethanol blends soften the gum and varnish that is holding rust to the inside of the storage tank, it is mandatory to use dispenser filters."

While it seems obvious, Vaporless Manufacturing, Inc. needs to caution and advise customers of the following:

Vaporless Manufacturing, Inc. equipment is and has been very long lived in normal field applications. Exposure to some particulates is normal and unavoidable. Any tank system that has abnormal particulate levels, as determined by the manufacturer, constitutes improper installation, misuse, and or abuse of the equipment and is grounds to consider the warranty null and void.

This clarification stands and always has been a part of our warranty consideration no matter what fuel our equipment is used with.

VMI urges tank owners to be fully aware of the different aspects of distributing ethanol fuels and to start with a **clean** and **dry** tank.

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